DOCUMENT RESUME

ED 076 245 PS 006 453

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TITLE To Evaluate Children's Intellectual Growth and Development in the Southeast Kansas Demonstration Child Development Center. Final Report.
INSTITUTION Southeast Kansas Demonstration Child Development Center, Fort Scott.
SPONS AGENCY Office of Education (DHEW), Washington, D.C.
BUREAU NO BR-2-G-046
PUB DATE 27 Feb 73
CONTRACT OEC-7-72-0014(509)
NOTE 54p.

EDRS PRICE MF-$0.65 HC-$3.29
DESCRIPTORS *Child Care Centers; *Child Development; *Cognitive Development; Control Groups; Curriculum Design; Experimental Groups; *Preschool Education; *Reading Readiness Tests; Research Methodology; Technical Reports; Test Results
IDENTIFIERS Denver Developmental Screening Test; Walker Readiness Test Forms A and B

ABSTRACT

The Southeast Kansas Demonstration Child Development Center was opened March 27, 1972 to provide day care services for working mothers. A research project in this Child Development Center was carried out to evaluate the children's intellectual growth and development in a planned educational pre-school curriculum. Ten children from the Child Development Center were used as the experimental group. The researcher decided that the experimental group of children had to be enrolled in the Center for at least ten months before the child could be included as part of the sample. Ten preschool children not attending this Child Development Center or any type of child care centers were selected for the control group. Both groups were tested by using the Denver Developmental Screening Test and the Walker Readiness Test, Forms A and B. The children in the experimental group showed a higher, but not significant, average in their reading readiness scores and showed a greater, but not significant, increase in their overall growth and development. The conclusions made from this study is that although there were no significant differences on the tests used, on the basis of other information such as anecdotal reports and observations, it seems as though a curriculum oriented Child Development Center which encourages growth and development helps a child to grow and develop in reading readiness skills, physical coordination, and socialization skills with other children his age. (Author)

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ED 076245

Final Report

Project No. 2-G-046
Grant No. OEC-7-72-0014 (509)

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Southeast Kansas Demonstration Child Development Center

February 27, 1973

PS 006453

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

Contract

Office of Education

Kansas City, Missouri

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The Southeast Kansas Demonstration Child Development Center was opened March 27, 1972 to provide day care services for working mothers. A research project in this Child Development Center was carried out to evaluate the childrens' intellectual growth and development in a planned educational pre-school curriculum.

Ten children from the Child Development Center were used as the experimental group. The researcher decided that the experimental group of children had to be enrolled in the Center for at least ten months before the child could be included as part of the sample. Ten pre-school children not attending this Child Development Center or any type of child care centers were selected for the control group. Both groups were tested by using the Denver Developmental Screening Test and the Walker Readiness Test, Forms A and B.

The children in the experimental group showed a higher, but not significant, average in their reading readiness scores and showed a greater, but not significant, increase in their overall growth and development.

The conclusion made from this study is that although there were no significant differences on the tests used, on the basis of other information such as anecdotal reports and observations, it seems as though a curriculum oriented Child Development Center which encourages growth and development helps a child to grow and develop in reading readiness skills, physical coordination, and socialization skills with other children his age.

Final Report

Project No. 7-0-046
Grant No. OEC-7-72-0014 (509)

To Evaluate Childrens' Intellectual Growth and Development in the Southeast Kansas Demonstration Child Development Center.

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February 27, 1973

The research reported herein was performed pursuant to a fixed price contract with the Office of Education, U.S. Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view of opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

U.S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

Office of Education
Kansas City, Missouri

ACKNOWLEDGMENTS

The author wishes to acknowledge the following people who contributed time and assistance in making this research project possible:

Dr. Larry Havilchek, Research Director, University of Kansas, Lawrence, Kansas.

Mrs. Sue Collins, Inservice Coordinator, St. Francis Hospital, Wichita, Kansas.

Miss Nadene Hazelwood, proofreader.

Mrs. Beth Campbell, teacher who kept anecdotal notes so faithfully on each child.

Mrs. Sheila Blubaugh, teacher who worked overtime so report could be completed.

Mr. John Page, who gave help and advice.

Mr. Edwin P. Rodman, husband, for patience.

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INTRODUCTION

To fully understand the importance of day care centers, this researcher feels that one needs to have some understanding of the literature and related research. Employment of women with young children has focused attention of the real need for day care centers. A selected review of literature will be done.

Review of Literature. Are day care services needed? "The number of working women has increased more than seven fold since 1940 and has more than doubled since 1950 (U.S. Dept. of Labor, 1969)." This trend will continue as more women supplement the family income.

"Even greater employment of mothers is expected in the future. Projections indicate that 5.3 million mothers aged 20 to 44 with children under five will soon be in the labor force representing a 43 percent increase between 1970 and 1980. In March, 1967, 10.6 million mothers with children under eighteen years of age were workers."[1]

There are many people who still feel that mothers of very young children should not work, but we must face the facts that the trend is definitely towards mothers working. With the high cost of living, the wife feels she must work to help supplement the family income. Our concern should be how we can help care for the children of working mothers.

According to latest estimates, day care in licensed centers and family homes is available for only 637,000 children, although several million children are said to need this service (Labor, 1969). A 1965 survey of child care arrangements made by working mothers revealed that of their preschool children less than one-half were cared for in their homes, approximately one-third in someone else's home, and a little more than five percent in group day care centers. Some were tended by the mother while she worked, and some "cared for themselves." (Labor, 1969)

Day care services are needed which provide a program for the total development of the child. Research has been done in many areas but none in the Fort Scott, Kansas area. One needs an orientation to the background of this research project. It is as follows:

Background of the Study. Southeast Kansas is a region considered economically depressed. In the city of Fort Scott, incomes are lower; the proportion of people on welfare is greater; the average age of the people is higher.[2] In an Occupational Survey of Fort Scott in March, 1968, of workers employed, 52.5% were female. The median family income

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[1] Butler, L. Annie, "The Child's Right to Quality Day Care," Association for Childhood Education International, 1970, page 59.

[2] Reconnaissance Study for Fort Scott, Kansas, October, 1970.

per year in Bourbon County is $3,511.00 with 42.2% of the families making less than $3,000.00 per year.[3] Children are cared for by relatives, private homes licensed to keep a small number of children, baby sitters and one private day care center which is too expensive for many mothers and is only open two mornings per week.

Michael Harrington points out in an article that there are 22,000,000 children under age 18 living in poverty in the United States. The National Committee against Mental Illness estimates that there are 4,000,000 children under age 14 who have emotional problems severe enough to need psychiatric care.[4]

Fort Scott seems to have its share of children living in poverty as well as those with emotional difficulties. There is no research oriented child development center in Southeast Kansas. Kansas City, Lawrence, and Wichita are some cities that have had success with day care centers. It is alarming to learn that Fort Scott does not have any facilities to help the mentally handicapped child. Parsons, Kansas, is the nearest city that offers help to the mentally handicapped.

Several assumptions have been made in determining that a child development center for the lower income family would be practicable and used. One assumption is that most families do not prefer to live in poverty and most parents do prefer that their child grow up to be healthy intellectually and physically. The problem seems to be that most parents do not really understand the normal growth development process and therefore do not do what is best for the child because of lack of understanding. There are welfare mothers who want to work, but cannot afford to have their children in private homes. Many families in Fort Scott have indicated a need for a child care center which encourages growth development of their child and also allows the parent (s) to work to help with the family budget.

Early child care is influencing patterns of development and the quality of life for children and adults. It is hoped that the Child Development Center here is influencing growth development for the better. In this research endeavor we will show how the children who have studied in the Southeast Kansas Demonstration Child Development Center have grown intellectually, physically, emotionally, and socially.

The procedure used to research the importance of day care centers in this locale is discussed in the following section.

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[3] Jay Cee Program Survey, March 15, 1966.

[4] Harrington, Michael, "The World of Poverty." American Federationists (April, 1966) page 34.

PROCEDURE

To help the reader understand more clearly the method in carrying out this research project, the writer has categorized the area she felt would be most important. First the exact procedure of how the research was conducted will be discussed, followed by a specific description of the variable tested, planned curriculum for the Demonstration Child Development Center, and the tests used in the research procedure. A description of the sample groups, both experimental and control, will be discussed and lastly the exact hypotheses under which the research was functioning.

Method. The research is an experimental design with ten children in the control group and ten children in the experimental group. The experimental group was in the Child Development Center for ten months. During the first week of their attendance at the Child Development Center, the research administered the Denver Developmental Screening Test. The experimental group attended the planned curriculum (See Definition of Terms "Demonstration Child Development Center," page 4) for five days a week from seven to ten hours per day. After ten months the test was again administered. Permission from each parent was secured before the test was administered. The Walker Readiness Test, Forms A and B were administered at the end of the ten month period also. A pre-test was not given since the test was not available until five months had elapsed.

The control group of children was administered the Denver Developmental Screening Test during the first month that the Child Development Center was in operation. After ten months to coincide with the experimental group, the Denver Developmental Screening Test was also administered as well as the Walker Readiness Tests, Forms A and B.

Data was collected using the Scoring Stencil Form A and Scoring Stencil Form B for the Walker Readiness Test and scoring was based on Table #1 of Form A and Table #2 of Form B. (See Appendix D and E.)

Data was collected for the Denver Developmental Screening Test on the test itself using the 50 Percentile Hatch Mark as the basis for pass or fail. (See "Test Form," Appendix F.)

Definition of Terms. The planned curriculum, Walker Readiness Test and Denver Developmental Screening Test are defined.

a. Planned curriculum for the Demonstration Child Development Center.

It is a curriculum oriented Child Development Center which encourages intellectual and physical growth and development. Learning experiences designed to promote skills in reading readiness, solving problems, and developing concepts. Activities for the group where the children listened to a story, participated in a science lesson or in music activities. Activities arranged

so that quiet play time followed active outdoor or indoor play.

The Child Development Center opens as early in the morning as is necessary for the working mothers who have children enrolled, which is usually between 6:30 and 7:00 a.m.

Children are free to choose from a variety of activities: blocks, puzzles, manipulative toys, books, records, T-V, and playing in a dress-up area.

The schedule for each day allows for a great deal of flexibility so children and staff can do what interests them most. However, there are certain events which occur daily and the schedules worked around the following: arrival, which is followed by a breakfast snack; free play; lunch; rest period; afternoon snack; and clean up and preparation for departure. Between these major structured activities the children have outdoor play, story and music groups, creative art activities, water play, field trips and a trip to the public library once a week. The choices for the children are many and varied.

b. Walker Readiness Test, Form A and Form B.
(See Appendix A and Appendix B.)

c. Denver Developmental Screening Test.
(See Appendix C.)

Sample. The experimental group consisted of ten children between the ages of three through five years, five girls and five boys.

Three children would be considered from low income families. ($3,500 annual income)[5] Two were considered to be from high income families. ($10,000 annual income)[6] The other five children were from families in the middle income bracket.

Both the experimental group and control group sample was selected by convenience. Each child enrolled in the program for ten months was used. In this, even the experimental sample was not controlled since the researcher could not control who applied for admission and how long they stayed in the Child Development Center.

The control group consisted of ten children ranging from ages three through five, four girls and six boys.

The children in the control group were selected by convenience, since the researcher wanted to eliminate a variable such as Headstart, nursery schools, etc. The children that were selected had not attended any type of pre-school.

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[5]Low income Government Standard.

[6]Personal interview with Judge Mason. High income salary level for Fort Scott, Kansas.

Four children in the control group were from low income families. Three children were from middle income families and two were from families in the high income bracket.

All children were caucasian. Five children in the experimental group were from broken homes, and none were from broken homes in the control group. Even though the researcher did not plan to control for sex or race, the groups were evenly matched on these variables.

Hypotheses. Since the research project tested for one specific variable, that of the planned curriculum of the Demonstration Child Development Center, the research has two hypotheses under which the project was evaluated.

a. Children who have been enrolled in the Demonstration Child Development Center for ten months will score higher on reading readiness as compared to those preschool children not enrolled in a day care center.

b. By using the Denver Developmental Screening Test, children who have been enrolled in the Demonstration Child Development Center for ten months will show a greater difference between their pre-test failing scores and post test failing scores as compared to the children not enrolled in the Child Development Center.

In the next section, the results of the research project will be discussed.

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RESULTS

The results were tabulated from the two tests, Walker Readiness Test and Denver Developmental Screening Test, used in testing the hypotheses. A description of these results will follow as well as a discussion of the results.

Description of Results. The Walker Readiness Test was used to evaluate all children at the end of ten months. The control group and experimental group were administered the test in a weeks' time. Table I describes the result of the experimental group.

Table I: Results of the Experimental Group, Walker Readiness Test, Form A and B

Experimental Subject #	Form A Score	Form A Percentile	Form B Score	Form B Percentile	Average Percentile of Form A & B
1	45	97.76	47	98.12	97.94
2	39	74.81	44	81.99	78.40
3	47	97.61	48	91.69	94.65
4	44	97.76	44	90.61	94.19
5	23	38.50	31	54.96	46.77
6	31	71.26	35	66.07	68.67
7	44	97.76	44	90.61	94.19
8	42	91.91	43	90.61	91.26
9	31	81.89	34	88.00	84.95
10	30	69.40	33	92.00	80.70
				Average	84.21

Table I shows the scores and percentiles of both Form A and B Walker Readiness Test for the experimental group. Each student is listed separately along with their average percentile of Form A and B. The mean percentile of the group is 84.21. Six children scored in the 90th percentile on the Form B test. Only one child (Subject #5) scored low compared to the others by scoring in the 30th percentile on Form A only. This same child was below the 50th percentile in the overall average. The researcher considers any child under the 50th percentile as needing more individual attention.

Table II: Results of the Control Group, Walker Readiness Test, Form A and B

Control Subject #	Form A Score	Form A Percentile	Form B Score	Form B Percentile	Average
1	44	94.19	47	94.45	94.32
2	37	89.93	30	40.93	65.00
3	Refused				
4	37	83.98	45	94.14	91.56
5	Refused				
6	19	14.07	23	11.06	12.34
7	38	97.16	38	79.52	88.34
8	33	81.89	29	54.00	67.95
9	23	45.80	Refused		
10	42	91.91	45	90.61	91.75
				Average	73.12

Table II shows the scores and percentiles of both Form A and B, Walker Readiness Test, for the control group. As was described in Table I, each student is listed separately along with their average percentile of Form A and B. The mean percentile of the group is 73.12. Three children scored in the 90th percentile on the Form A test, and three children scored in the 90th percentile on the Form B test. Two children scored below the 50th percentile on the Form A test, and Subject #6 scored in the 14th percentile on the Form A test. Two children scored below the 50th percentile on the Form B test and Subject #6 once again scored low in the 11th percentile. The same child was below the 50th percentile in the overall average. The researcher would then consider that Subject #6 needs special attention.

Table III: The number of failures in each category for each child in the Experimental Group, Denver Developmental Screening Test

Experimental Subject #	Personal-Social Pre-test	Personal-Social Post test	Fine Motor Pre-test	Fine Motor Post test	Language Pre-test	Language Post test	Gross Motor Pre-test	Gross Motor Post test
1	1	0	0	0	0	0	0	1
2	0	0	1	0	2	2	4	0
3	0	0	0	0	1	1	4	0
4	0	0	1	0	1	1	1	0
5	2	0	4	1	4	0	2	1
6	2	0	2	0	5	2	4	2
7	1	0	0	0	2	0	5	0
8	2	1	1	0	2	0	3	0
9	3	1	2	0	1	0	2	0
10	2	0	1	0	2	1	1	0
11	2	1	2	1	4	1	---	---
12	4	1	2	1	4	0	1	1
Total	19	4	16	3	28	9	27	5
Difference	15		13		20		22	

Table III shows the results of the Denver Developmental Screening Test for the experimental group. The areas tested were the child's personal-social skills, fine motor skills, language skills and gross motor skills. At any age a child is considered to need special attention if he fails two of the behaviors in any category. For instance, Subject #6 would be considered as needing special attention even yet in his gross motor skills because of two failures after ten months of day care activities, even though his failures have decreased from four to two during this ten month period.

The total number of entrance failures in personal-social behavior was 19. After ten months of pre-school activities the total number of failures dropped to 4. However, no child would be considered as having a special problem since no more than one failure was scored per child.

The same applies to the fine motor, language and gross motor skills.

If a child refused to cooperate, these were not counted as failures. For instance, Subject #1 refused to cooperate on some items of the pre-test, but was very eager to cooperate and try after ten months.

Also, we have Subject #11 and Subject #12 in Table III because these two subjects moved away from Fort Scott three weeks before the post test was given. Since it was so near the end of the ten month period, the researcher included these two subjects.

Table IV: The number of failures in each category for each child in the Control Group, Denver Developmental Screening Test

Control Subject #	Personal-Social		Fine Motor		Language		Gross Motor	
	Pre-test	Post test	Pre-test	Post test	Pre-test	Post test	Pre-test	Post test
1	0	0	0	0	2	0	1	0
2	3	1	3	1	3	0	4	2
3	2	1	2	0	0	2	0	0
4	1	0	0	0	2	0	2	3
5	---	0	---	0	---	2	---	0
6	4	1	4	3	4	2	0	0
7	0	0	0	0	2	0	4	2
8	2	0	3	0	2	3	4	0
9	2	1	2	1	0	1	4	1
10	1	0	0	0	1	0	1	0
Total	15	4	14	5	16	10	20	8
Difference	11		9		6		12	

Table IV shows the results of the Denver Developmental Screening Test for the control group. This Table shows that several children had two or more failures after a ten month period.

If we compare the difference in the total number of failures in Table III and Table IV, a difference is shown by the decrease in the number of failures in Table III with the experimental group as compared to Table IV in the control group.

The means and standard deviation of the average scores from Form A and B of the Walker Readiness Test for both the experimental and control groups are presented as follows in Table V.

Table V: Means and Standard Deviations for averaged Walker Readiness Scores (Form A and Form B) for Experimental and Control Groups

	Experimental	Control
N	11	7
Mean	84.21	73.12
Standard Deviation	15.31	29.11

The t test was used to determine if the difference between these two means was significant. The computed t was 1.06 and with 16 degrees of freedom this is not significant at the .05 level. The formula that was used for the t test is as follows:[7]

$$t = \frac{M_1 - M_2}{\sqrt{\frac{\sum x_1^2 + \sum x_2^2}{N_1 + N_2 - 2}\left(\frac{N_1 + N_2}{N_1 + N_2}\right)}}$$

The mean change scores for the experimental and control groups for each of the four sub-test scores on the Denver Developmental Screening Test are presented in Table VI. The change scores are based on the difference between the scores on these tests given in April and the post test given in February of the following year.

Table VI: Mean Changes on Denver Developmental Screening Test Sub-Tests for Experimental and Control Groups

	Experimental				Control			
	P.S.	F.M.	Lang.	G.M.	P.S.	F.M.	Lang.	G.M.
N	11	11	11	10	9	9	9	9
Mean	1.25	1.09	1.58	2.09	1.22	1.00	0.88	1.33
SD	.97	.90	1.44	1.64	.97	1.12	.67	1.33

[7]Guilford, J. P., Fundamental Statistics in Psychology and Education, McGraw-Hill, Formula for t test, page 183.

In order to determine if there were any significant differences between the change scores of the experimental group compared to the control group, t tests for independent samples were again used. The t values for, respectively, the Personal-Social, Fine Motor, Language, and Gross Motor subtests were .07, .1[illegible] and .92. None of these are significant. Thus, none of the changes for the experimental group was significantly different from the control group.

Discussion of the Results. The hypothesis stated on page 5 that there would be an average percentile difference in the reading readiness scores of the two groups. Without any statistical tests, one can see by Table I that the experimental group had an average percentile of 73.12. However, on the basis of the t test, the difference was not significant at the .05 level of probability.

Hypothesis 5 states, page 5, that after ten months in the Child Development Center, there would be a greater difference between the failing scores.

On the basis of the information given in Table III and Table IV, the differences are greater in the experimental group. However, none of the differences are significant at the .05 level on the basis of the t tests.

For instance, in the language skills, the experimental group shows a decrease of twenty failures as compared to the control group which shows a decrease of only six failures. At the end of ten months period, one could say the language skills of the experimental group is better since the number of failures is eight and the control group still has ten failures. In each area the difference in the experimental group had less failures than the control group.

In addition to these two specific tests that were done, the head teacher of the Child Development Center kept anecdotal notes on each child in the experimental group to further show how overall behavior progressed in a positive direction. The summary notes by Mrs. Campbell follow.

Kristyn. Kristyn is a delightful, perky three year old, who is well liked by all the children. She plays well with others and never hits, but defends herself vocally and hangs on. She is very loving and likes to hug and kiss people.

When she first came, she couldn't share or take turns. She did not understand that when she was playing with something else, that she had to give up the first choice that she had left. She was very concerned with "mine" and "yours." She went from one thing to another rapidly.

Now Kristyn can work at one thing for a length of time, particularly pasting or painting. She shares and takes turns unusually well for her age. She uses her well-developed language skills to solve social problems and to develop play. She loves to play chase, "monster," house, or anything that a group is playing with a lot of running and laughing.

She does not ask for so much lap sitting and holding as she used to.

She can count to four with one to one correspondence and to ten by rote. She drew circles over and over again for months and now recently she has started drawing people--round head, eyes, eyebrows, nose, mouth (two lips), hair, two arms and two legs with feet. She recognizes the K and her name and now is trying to print her own name.

Tina. Tina is a good-natured child who is welcome in most of the other children's play. She enjoys playing "house" or some kind of animal or monster or playing like going on a trip. She has not always welcomed others in the playhouse. Now she is almost always involved with others in play.

She is highly imaginative, but often is confused between what is real and what isn't. It is hard for her to participate in a helpful way in Magic Circle because she can't stick to telling what really happened. She often makes up what she tells and it is very obvious because it is so unrealistic. She loses her shoes every day and sometimes other personal items because she can never remember what she did with anything. She has improved recently in keeping up with her shoes. She almost had to stay here instead of going to the library with the others because it took so long to locate her shoes.

She does not follow directions well, usually forgets what she was about before she gets through. She never hears total group instructions. She is getting more purposeful in cutting and pasting now. When others are putting away, she starts to help, but then gets involved in playing with items and forgets it is time to put away. She can count by rote to ten; four to five with one to one correspondence. She recognizes her name and the letter T. She enjoys puzzles and can work them all well. She draws head and legs type figures.

She is the baby of five and walks still as if she had a diaper between her legs. She is used to being taken care of, and developing responsibility for herself is going to take a while.

She does not allow other children to dominate her and lets them know definitely and orally if that is not the way she wants to do it. She does not cry often.

Darren. Darren has a time being able to play without hurting others' feelings by what he says or grabbing what he wants or claiming others' possessions as his own. He seems to depend on how he feels when he comes as to how well he can play with others. He often likes to exclude others as "I can do so and so, but you can't." His behavior is gradually improving, so that he has some days now when he plays happily without hurting others. The negative behavior happens less and less frequently.

However, he is very kind and gentle with the guinea pigs and talks baby talk to them.

He really responds to the input of Magic Circle (considering he is only here two or three days a week). He always participates well

and likes to tell about happenings. At other times he says, "That made me feel good," (or bad) and he is taking real pleasure in knowing he can make others feel good (although he still likes to make them feel bad at times).

He is really interested in geometric shapes, knows their names, and enjoys designs and tracing. He often draws and paints in geometric shapes. He counts to twenty by rote and can count to ten with good one to one correspondence. He knows some letters of the alphabet. He attempts to print his name and has always cut well.

Eddy. Eddy knows all the letters, lower and upper case, and needs no help in finding pictures of beginning sounds. He works well on his own but wants the teacher to watch. He can count accurately to 100 now with no help and insists on putting his own name on his paintings.

Recently his painting has changed from a simple house, tree or car to a story acted out in paint, usually a car or building or a whole city exploding and burning. He enjoys violently throwing the paint on in splotches, saying, "Now it exploded here!" or "Explosions all over!" or "Now the fire is on the roof, now it's all black where it was burned." The picture then looks like nothing but a mess, if one had not listened to the running commentary.

When I asked Eddy if he wanted to read (he seems ready in every way), he replied, "No, I'll read when I'm five."

He has shown progress in his participation in Magic Circle. At first he would hide from us at Circle time, then he reluctantly came and sat nearby. After that he would sit by a teacher, but announce, "I'm not going to do it." Sometimes he would lay down during the Circle. Now he sits up and participates well.

He still plays alone much and really concentrates on his project long enough to finish what he intended to do. He does play with others more, especially cars and roads, cooperative building with unit blocks and chase games.

We are still concerned about his hearing as he talks so loudly and often asks us to repeat.

Christl. Christl plays almost entirely with Paul and is unhappy if he does not come that day. Occasionally she has played with some girls while Paul did something else, but only recently has that happened. She and Paul are not exclusive and have been very helpful in being willing for Jimmy to play with them, but not allowing him to bully them.

Christl is very vocal. She persuades by saying, "Well, all right, but I was going to give you a half a dollar, but now I won't," or "I'm not going to play with you anymore" followed by "and I was going to give you such and such."

If she joins a group at the table in the middle of a project, she says, "Gee whiz, teacher, aren't I going to get a turn?" even though she hadn't indicated interest before.

She likes to play rough and tumble with the boys or army men or farm with Paul. She also likes to draw and paint. Her drawings of people include head, two legs, feet, ears (or arms?), eyes, nose, mouth, and sometimes eyebrows. She draws lots of people and houses. With talking about it from a teacher, she drew a guinea pig. At first she had trouble with cutting, but now can cut out a heart on the line. She recently learned to print her name and puts it everywhere. By rote she counts to twenty-nine, but one to one correspondence breaks down after twenty.

She and Paul really like to sneak and tease. Two months ago they were at their worst, openly ignoring any rules or requests from teachers and fighting each other. Now they are obeying the limitations and rarely have to be separated.

Christl used to pout and cry for long periods of time when corrected, saying, "I get scared when I'm in trouble." Now she accepts correction matter-of-factly.

She has had a problem with having to go to the bathroom four times at the beginning of naptime, but that is diminishing and she settles down sooner. Her parents have had treatments with a medical doctor for her for this problem. Now it seems to be more mental than physical.

Robert. His speech is improving so that we no longer have a problem in understanding what he says. He also speaks up louder and lets us know what he needs.

Robert is well-liked by the other children. He plays best with one other child, but is expanding this recently to include two or three others. He prefers to have someone to play with rather than working by himself. He hits and bites very infrequently now. As his speech improves, so does his ability to deal with others with words instead of biting.

He has always liked Magic Circle particularly well and really enjoys participating in it. His stories and comments are always appropriate and he often makes an effort to be original instead of just copying what someone else did. He listens and follows instructions well.

In September he counted to five. Now he counts to twenty-nine accurately and then says, "That's all. I don't want to count any farther." He can add one more.

He is hesitant about drawing and usually asks the teacher to "Make it for me." But after our trip to the fire station, he was very pleased to see how well he could draw a fire truck and kept adding more and more details. We heard no more "I can't"s.

Paul. Paul is a very bouncy, friendly four year old boy. His best friend is Christl whom he plays with almost constantly. They play well together, occasionally arguing and fighting. Neither one dominates more than the other.

Paul likes rough and tumble play and chase games. He likes to play "ghost" and "monster," and to wrestle. Others like to play with him as he is generally accepting and has fun play ideas.

Paul has had difficulty learning to draw a face. At Halloween, he kept putting the Jack o'Lantern face on sideways. Now he can put the face on correctly. He draws a large head with eyes, nose and mouth.

He is very social and physical in play and does not care to do readiness games with the teacher. He does like to draw, cut and paste. He can now draw around a heart pattern well and cut it out perfectly. He counts to ten with good one to one correspondence.

He had trouble understanding that he had to obey some rules at the Center, and still tries to conceal toys to play with during rest time, but otherwise does not deliberately disobey.

Danna. Danna is very perky and outgoing. She likes and gets along with other children well. She prefers to play with the five year old girls. Her favorite play is pon-pom girl (with march music) house, and school. She is beginning to really enjoy the blocks--builds roads, garages, houses, barns and tall, fancy buildings, usually with someone else. She plays cooperatively very well, but really likes to direct the play. She uses oral language well and "talks" other children into what she wants. She knows what she wants, and is very firm about her personal rights. She lets the others know in no uncertain terms. Consequently she is rarely ever picked on. She rarely hits, but she will fight back if necessary. She takes turns and follows the rules of a game.

She likes to learn. She has very clear number concepts of one to one correspondence. She counted to ten in October and now counts to twenty-nine with good one to one correspondence. She can add and subtract one. She knows all but four letters of the alphabet. She is learning to sight read some words from her desire to keep up with Ronnette who is learning to read. She is recently interested in rhyming words. She prints her own name.

Ronnette. Although Ronnette is only five and one-half years old, she is doing first grade work. This fall she has progressed very rapidly in learning all the letters of the alphabet, recognizing beginning sounds, and is now reading in SRA's "A Pig Can Jig" reader. She counts objects to 100 accurately and by ten's also. She enjoys printing all the words she knows on pieces of paper, and writes names of other children on their papers.

When Ronnette first came, she angered other children by forcing them to let her "mother" them. She did not know how to play with them otherwise. Now the only semblance of this that remains is that she tries to play "teacher" for them. But most of the time, she plays very cooperatively with any of the children. She is still very quiet, but no longer stands around uninvolved, just watching. She usually knows what she wants to do. She even becomes loud and silly when playing with Danna, her best friend. They have been making up songs to sing while swinging double.

Jimmy. Jimmy's behavior is slowly improving. After his absence of several months from the Day Care Center, his biting and temper tantrums returned in full force. Now the tantrums have ceased and he bites only once in a week or so.

He was completely unable to play with others without destroying the project or game. Now he can play with some one to build a quick building or road and enjoy it a short while before destroying it. He enjoys the very active group play and chase games, but he wants to play rougher than most do, so he gets lots of complaints finally. The older ones tell him, "You can't play any more, Jimmy, if that's what you're going to do!" He wants to play badly enough to try. He is much more interested in playing with people rather than things, but he does both roughly. In order to allow other children to play freely, the teacher would spend an hour or so a day holding Jimmy and reading to him (which he loved). This is decreasing now, as he is able to play with others for longer periods of time. Paul and Christl have been very helpful in allowing Jimmy to play with them when others won't.

He counts accurately to four and recognizes his name. He can draw a circle with eyes, nose, mouth and hair. He asks lots of "why" questions and tells highly imaginative stories.

CONCLUSION

Throughout this ten months of research, the Child Development Center has contributed in a positive way to the growth and development of the preschool children involved. Parents have been satisfied and have expressed many times how they have seen a change in their child's behavior and learning skills.

Problems encountered. The problems encountered are as follows:

a. Finding low-income children not enrolled in Headstart or other per-school settings.
b. Many mothers on welfare do not work, therefore they do not receive funds for day care services.
c. The low-income housing project has a great turnover in renters, therefore it was difficult to find children to meet the sample requirements.
d. Researcher ordered three tests not appropriate for this age group, therefore the conclusions could be based on only two tests.
e. There was no way to control outside environmental variables such as fighting parents, divorces, sickness, boyfriends, etc.
f. Transportation.
g. Location of Center.

RECOMMENDATIONS

On the basis of this research project and the problems encountered, the researcher recommends the following:

a. Larger sample
b. On a one year grant, limit the study to six to eight months.
c. More day care centers in the city to provide more comprehensive services to children.
d. Day care services provided at a lower cost to low-income parents, i.e. sliding fee scale.
e. More interchange with the colleges, Kansas State College of Pittsburg and Fort Scott Community College.
f. More studies to be done of this type especially how the environment influences the child's growth and development even in planned curriculum.

BIBLIOGRAPHY

Journals

Harrington, Michael. "The World of Poverty," American Federationists, April, 1966.

Risley, Todd. "Learning and Lollipops," Psychology Today, January, 1968.

Articles

Butler, Annie L. "The Child's Right to Quality Day Care," Association for Childhood Educational International, 1970, page 59.

Jay Cee Program Survey, March 15, 1966.

Low Income Government Standard.

Reconnaissance Study for Fort Scott, Kansas, October, 1970.

Wage and Labor Standards Administration, Women's Bureau, October, 1969.

Books

Baldwin, Alfred L. Theories of Child Development, John Wiley and Sons, Inc., 1967.

Guilford, J. P. Fundamental Statistics in Psychology and Education, McGraw-Hill, 1970.

Interviews

Judge Mason. Probate Court, Fort Scott, Kansas.

APPENDIXES

Appendix A

FINAL REPORT
PROJECT NO. 9-F-017
GRANT NO. OEG-6-9-009017-0059 (010)

DEVELOPMENT OF A READINESS TEST FOR DISADVANTAGED PRE-SCHOOL CHILDREN IN THE UNITED STATES

WALKER READINESS TEST FOR DISADVANTAGED PRE-SCHOOL CHILDREN FORM A

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Maryville, Missouri 64468

The research reported herein was performed pursuant to a grant with the Office of Education, U. S. Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

U. S. Department of Health,
Education, and Welfare

Office of Education
Bureau of Research

Walker Readiness Test for Disadvantaged Preschool Children
Form A

DIRECTIONS FOR ADMINISTERING THE TEST

For best results, take the child to a room where you will have his undivided attention and explain that you are going to play a new game with him. To avoid distraction, use a blank sheet of paper to keep covered all of the items except the one you are showing the child. Be sure that he understands directions, but do not help him with the test items. An example is given for each subtest; it should be used to determine whether or not the child understands what is expected of him. Do not deviate from the instructions. When the child indicates his choice of answers, encircle on his answer sheet the capital letter which corresponds to his choice. Scoring may be done later with the scoring stencil provided with the test.

PART I: LIKENESSES OR SIMILARITIES (Items 1-15)

Specific instructions are given at the beginning of the subtest. The test administrator should point first to the picture on the left, then to those on the right while asking the child to indicate which one is just like the one on the left.

PART II: DIFFERENCES (Items 16-30)

This subtest has three different parts. Each part has its own directions at the top of the page. The first part, items 16-20, deals with the concept of size. The child is expected to select the largest one of the four pictures presented. The second part, items 21-25, deals with differences. Three of the pictures in each item are alike; the child is directed to select the one which is not like the others. The third part, items 26-30, deals with a more difficult concept. In each item, three of the pictures belong together; the child is asked to select the one which does not belong with the others.

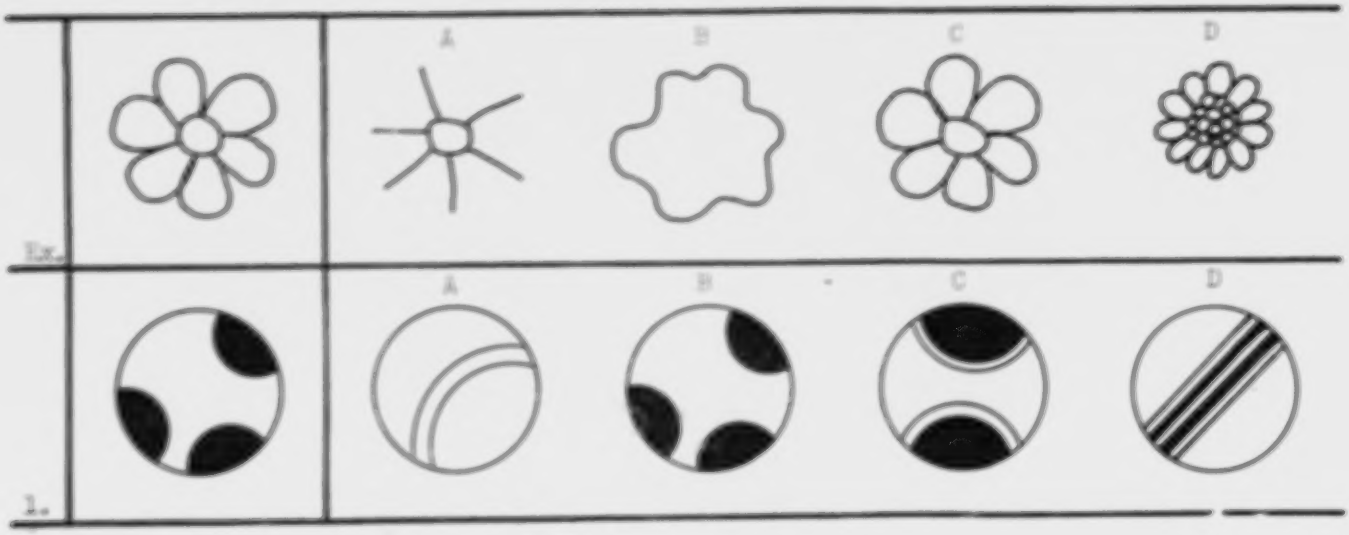
PART III: NUMERICAL ANALOGIES (Items 41-45)

This subtest deals with number concepts. Arrangements of pictures are different, but for each item one alternative contains the same number of objects as the one on the left. Pointing to the picture on the left, the test administrator should ask the child to indicate the picture on the right which contains the same number of objects.

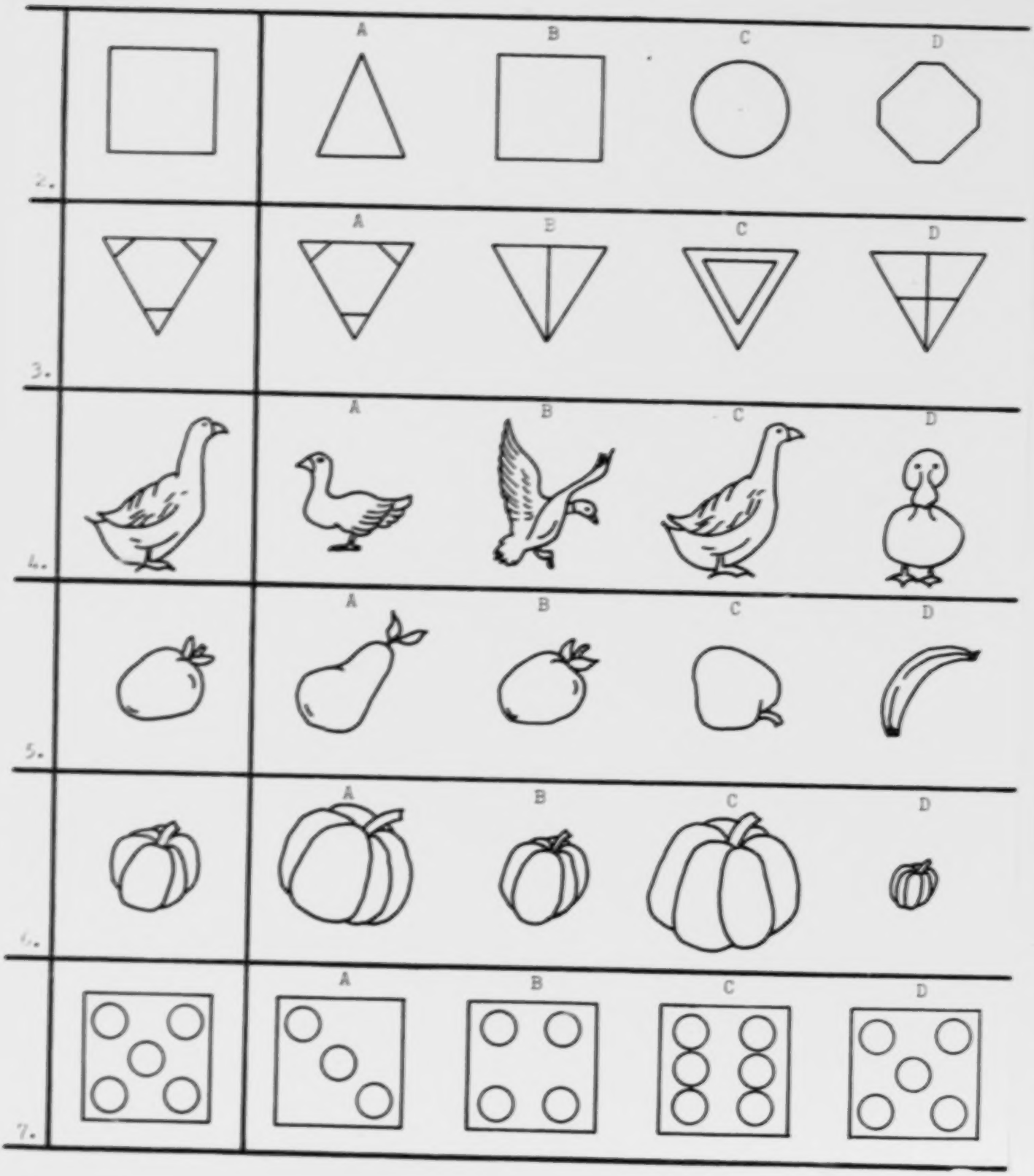
PART IV: MISSING PARTS (Items 46-50)

In this subtest the child is expected to choose from four pictures the one which will make a complete object of the picture on the left. The test administrator should point to the incomplete object on the left and ask the child to indicate the one on the right which belongs to it.

PART I: SIMILARITIES: Point to the picture on the left and say, "Now, show me the one over here" (gesture toward items on right) "that looks just like this one."
"Maintenant, montre-moi celui ici qui est exactement comme celui-ci."
"Ahora, muéstrame el aquí que es muy semejante a éste."



PART I: SIMILARITIES: Point to the picture on the left and say, "Now, show me the one over here" (gesture toward items on right) "that looks just like this one."
"Maintenant, montre-moi celui ici que est exactement comme celui-ci."
"Ahora, muéstrame el aquí que es muy semejante a éste."



PART I: SIMILARITIES: Point to the picture on the left and say, "Now, show me the one over here" (gesture toward items on right) "that looks just like this one."
"Maintenant, montre-moi celui ici que est exactement comme celui-ci."
"Ahora, muéstrame el aquí que es muy semejante a éste."

		A	B	C	D
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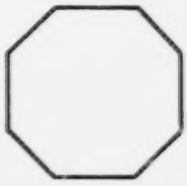
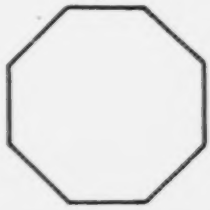
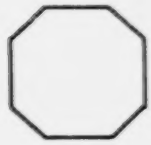
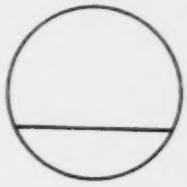
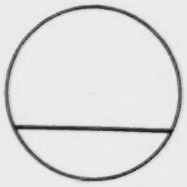
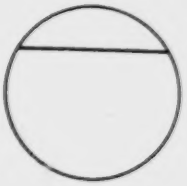
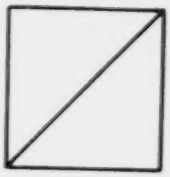
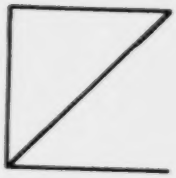
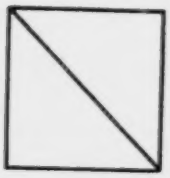
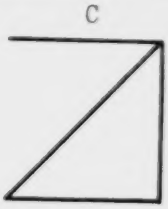
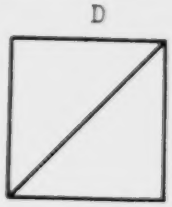
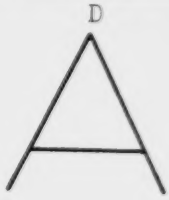
9.					
10.	yellow	black	red	green	yellow
11.					
12.					
13.					

PART I: SIMILARITIES: Point to the picture on the left and say, "Now, show me the one over here" (gesture toward items on right) "that looks just like this one."
"Maintenant, montre-moi celui ici que est exactement comme celui-ci."
"Ahora,muéstrame el aquí que es muy semejante a éste."

		A	B	C	D
14.					
15.					
16.					
17.					
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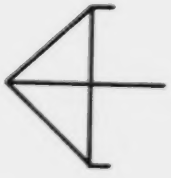
19.					

PART I: SIMILARITIES: Point to the picture on the left and say, "Now, show me the one over here" (gesture toward items on right) "that looks just like this one."
"Maintenant, montre-moi celui ice que est exactement comme celui-ci."
"Ahora, muéstrame el aquí que es muy semejante a éste."

		A	B	C	D
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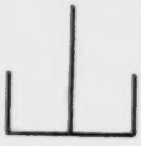
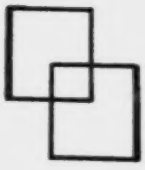
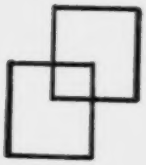
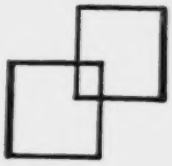
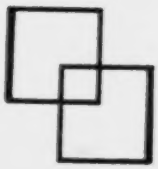
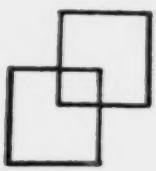
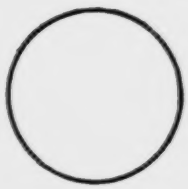
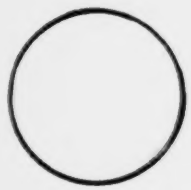
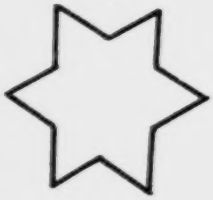
21.					
22.					
23.					
24.	AOU	AUO	OAU	AOU	UAO
25.					

PART II: DIFFERENCES: Point to the pictures in each item and say, "Now, show me which one of these is the biggest one."
"Maintenant, montre-moi lequel de ceux-ci qui est le plus grand."
"Ahora, muéstrame cual de éstos que es el más grande."

	A	B	C	D
Ex.				
26.				
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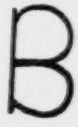
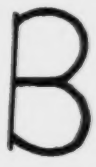
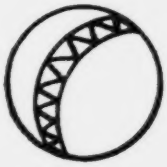
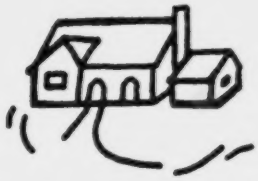
28.				
29.				
30.				

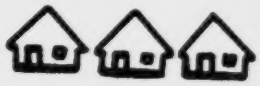
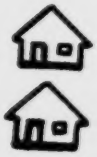
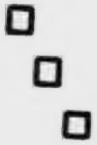
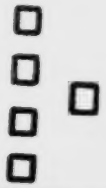
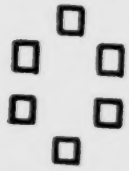
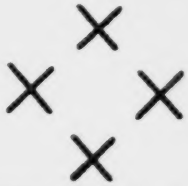
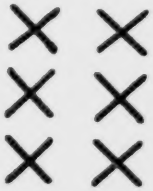
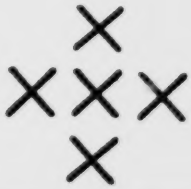
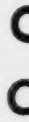
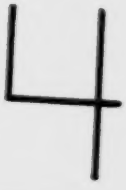
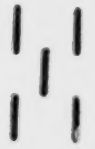
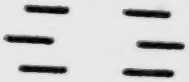
PART II: DIFFERENCES: Point to the pictures in each item and say, "Now, show me which one of these does not look like the others."
"Maintenant, montre-moi lequel de ceux-ci qui n'est pas comme les autres."
"Ahora, muéstrame cual de éstos que no es semejante a los otros."

	A	B	C	D
Ex.				
	A	B	C	D
31.				
	A	B	C	D
32.				
	A	B	C	D
33.				
	A	B	C	D
34.				
	A	B	C	D
35.				

PART II: DIFFERENCES: Point to the pictures in each item and say, "Three of these belong together. One does not belong. Show me which one does not belong with the others."
"Trois de ceux-ci sont du même genre. Un ne l'est pas. Montre-moi lequel qui ne l'est pas."
"Tres de éstos son de mismo género. Uno no lo es. Muéstrame el que no lo es."

	A	B	C	D
Ex.				
36.				
37.				
38.				
39.				
40.				

PART III: NUMERICAL ANALOGIES: Point to the picture on the left and say, "Now, show me the one over here" (gesture toward items on right) "that has the same number as this one."
"Maintenant, montre-moi celui ici qui a le même numéro que celui-ci."
"Ahora, muéstrame el aquí que tiene el mismo número que éste."

		A	B	C	D
Ex.					
41.					
42.					
43.					
44.					
45.					

PART IV: MISSING PARTS: Point to the picture on the left and say, "Now, point to the one over here" (gesture toward items on right) "which belongs to this one."
"Maintenant, indique celui ici qui appartient à celui-ci."
"Ahora, señala el aquí que pertenece a éste."

		A	B	C	D
Ex.					
46.					
47.					
48.					
49.					
50.					

Appendix B

FINAL REPORT
PROJECT NO. 9-F-017
GRANT NO. OEG-6-9-009017-0059 (010)

DEVELOPMENT OF A READINESS TEST FOR DISADVANTAGED PRE-SCHOOL CHILDREN IN THE UNITED STATES

WALKER READINESS TEST FOR DISADVANTAGED PRE-SCHOOL CHILDREN
FORM B

Dr. Wanda Walker
Professor of Psychology
Northwest Missouri State College
Maryville, Missouri 64468

The research reported herein was performed pursuant to a grant with the Office of Education, U. S. Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

U. S. Department of Health,
Education, and Welfare

Office of Education
Bureau of Research

DIRECTIONS FOR ADMINISTERING THE TEST

For best results, take the child to a room where you will have his undivided attention and explain that you are going to play a new game with him. To avoid distraction, use a blank sheet of paper to keep covered all of the items except the one which you are showing the child. Be sure that he understands directions, but do not help him with the test items. An example is given for each **subtest**; it should be used to determine whether or not the child understands what is expected of him. Do not deviate from the instructions. When the child indicates his choice of answers, encircle on his answer sheet the capital letter which corresponds to his choice. Scoring may be done later with the scoring stencil provided with the test.

PART I: LIKENESSES OR SIMILARITIES (Items 1-25)

Specific instructions are given at the beginning of the **subtest**. The test administrator should point first to the picture on the left, then to those on the right while asking the child to indicate which one is just like the one on the left.

PART II: DIFFERENCES (Items 26-40)

This **subtest** has three different parts. Each part has its own directions at the top of the page. The first part, items 26-30, deals with the concept of size. The child is expected to select the smallest one of the four pictures presented. The second part, items 31-35, deals with differences. Three of the pictures in each item are alike; the child is directed to select the one which is not like the others. The third part, items 36-40, deals with a more difficult concept. In each item, three of the pictures belong together; the child is asked to select the one which does not belong with the others.

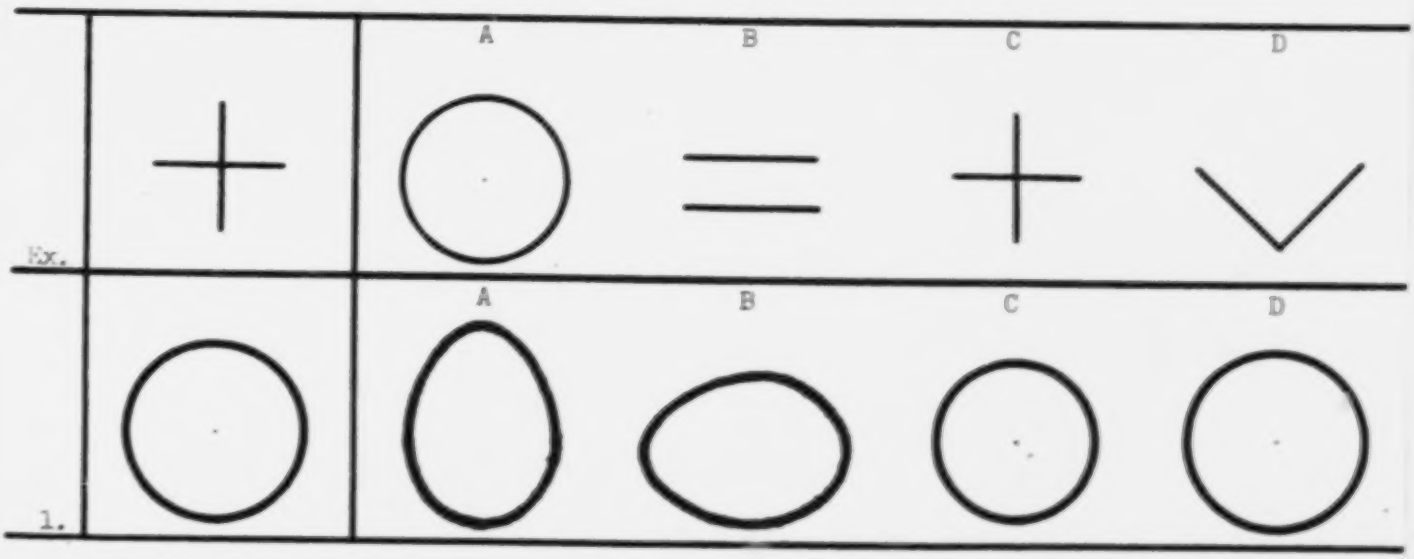
PART III: NUMERICAL ANALOGIES (Items 41-45)

This **subtest** deals with number concepts. Arrangements of pictures are different, but for each item one alternative contains the same number of objects as the one on the left. Pointing to the picture on the left, the test administrator should ask the child to indicate the picture on the right which contains the same number of objects.

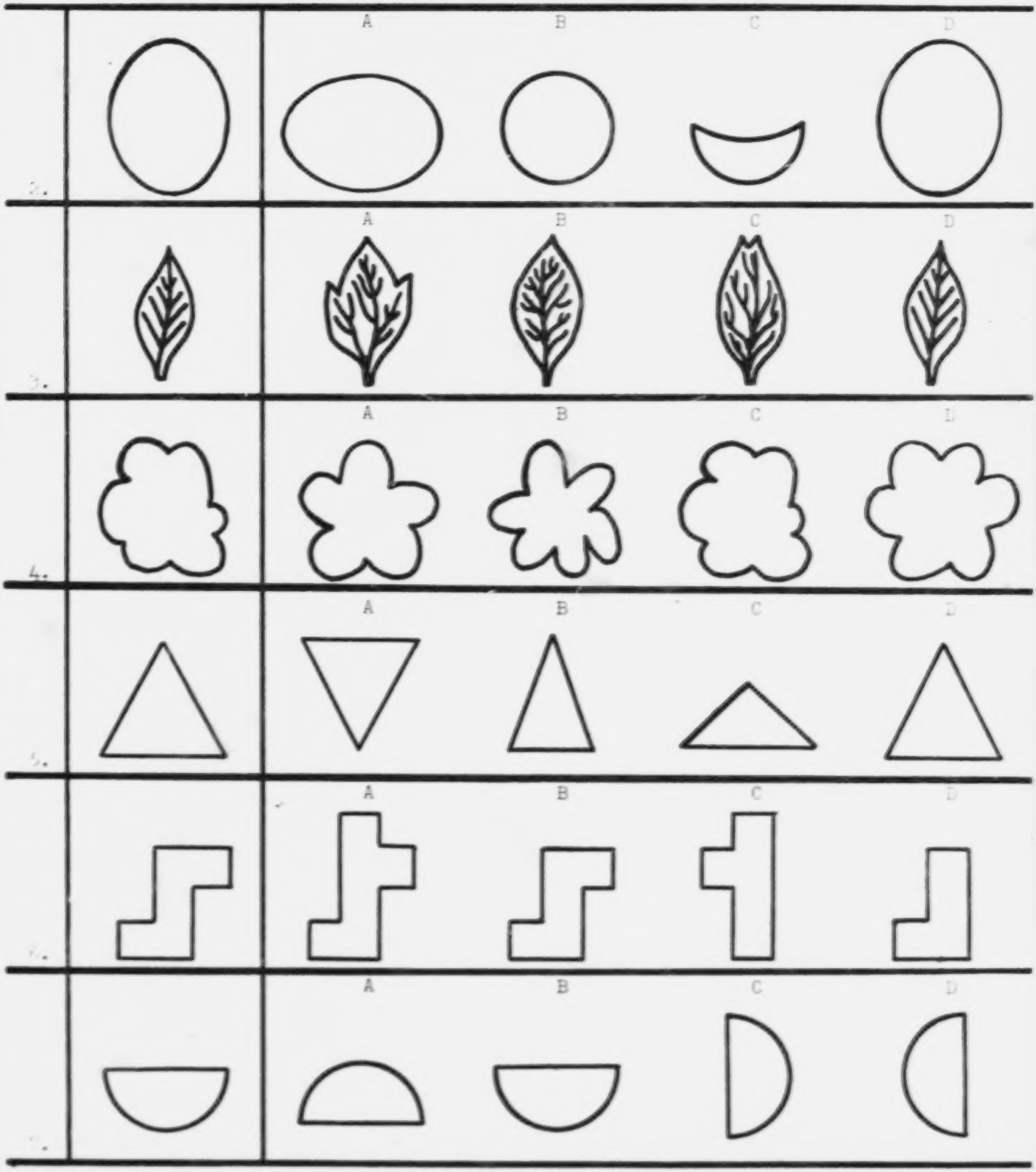
PART IV: MISSING PARTS (Items 46-50)

In this **subtest** the child is expected to choose from four pictures the one which will make a complete object of the picture on the left. The test administrator should point to the incomplete object on the left and ask the child to indicate the one on the right which belongs to it.

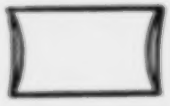
PART I: SIMILARITIES: Point to the picture on the left and say, "Now, show me the one over here" (gesture toward items on right) "that looks just like this one."
"Maintenant, montre-moi celui ici qui est exactement comme celui-ci."
"Ahora, muéstrame el aquí que es muy semejante a éste."



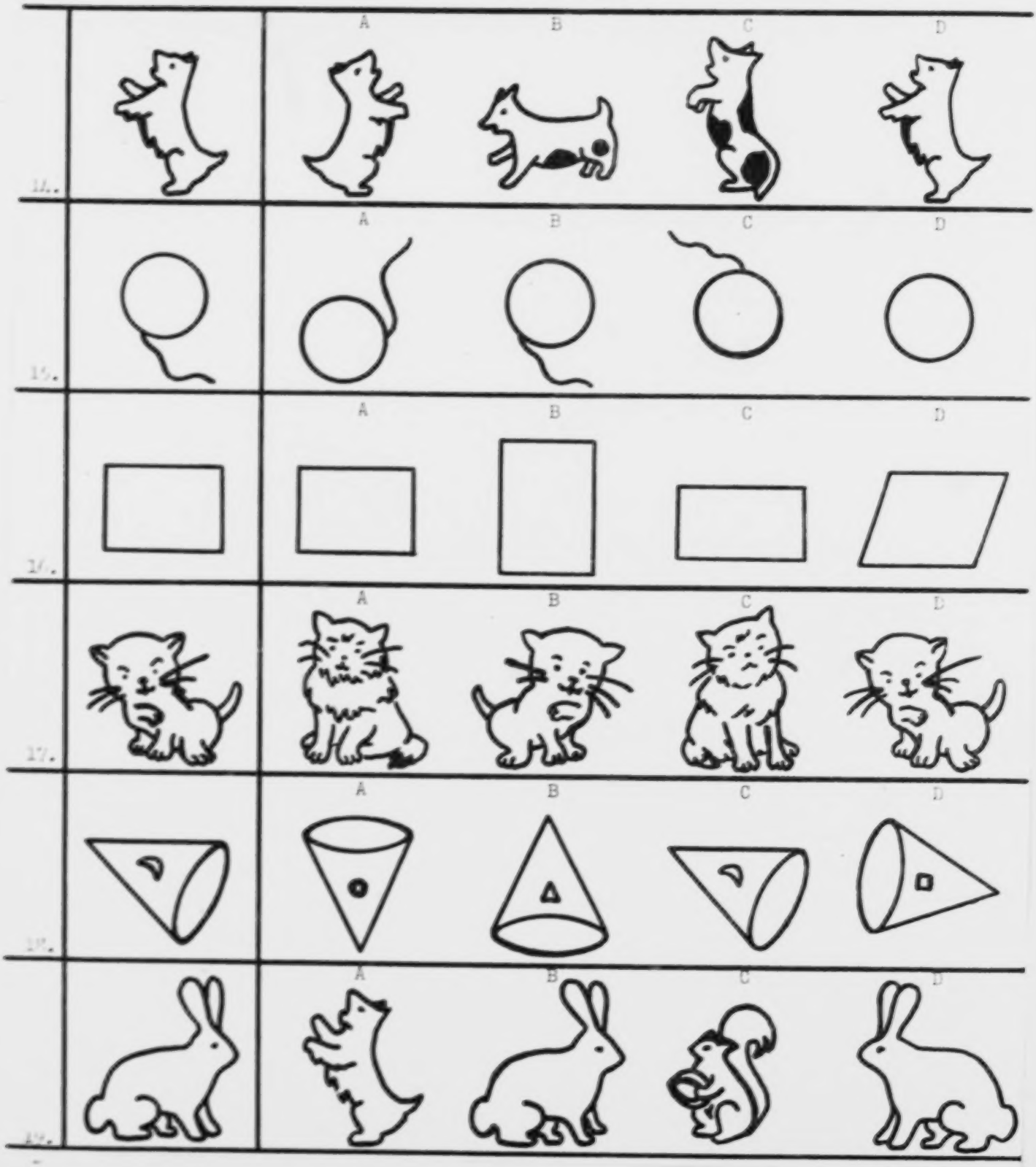
PART I: SIMILARITIES: Point to the picture on the left and say, "Now, show me the one over here" (gesture toward items on right) "that looks just like this one."
"Maintenant, montre-moi celui ici que est exactement comme celui-ci."
"Ahora, muéstrame el aquí que es muy semejante a éste."



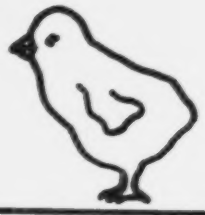
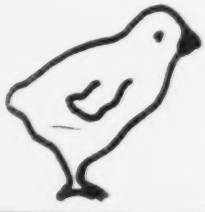
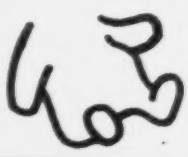
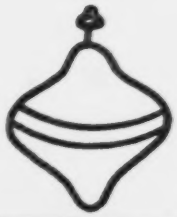
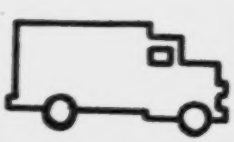
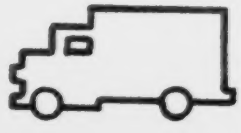
PART I: SIMILARITIES: Point to the picture on the left and say, "Now, show me the one over here"(gesture toward items on right) "that looks just like this one."
"Maintenant, montre-moi celui ici que est exactement comme celui-ci."
"Ahora, muéstrame el aquí que es muy semejante a éste."

		A	B	C	D
8.					
9.					
10.					
11.					
12.					
13.					

PART I: SIMILARITIES: Point to the picture on the left and say, "Now show me the one over here" (gesture toward items on right) "that looks just like this one."
"Maintenant, montre-moi celui ici que est exactement comme celui-ci."
"Ahora,muéstrame el aquí qui es muy semejante a éste."

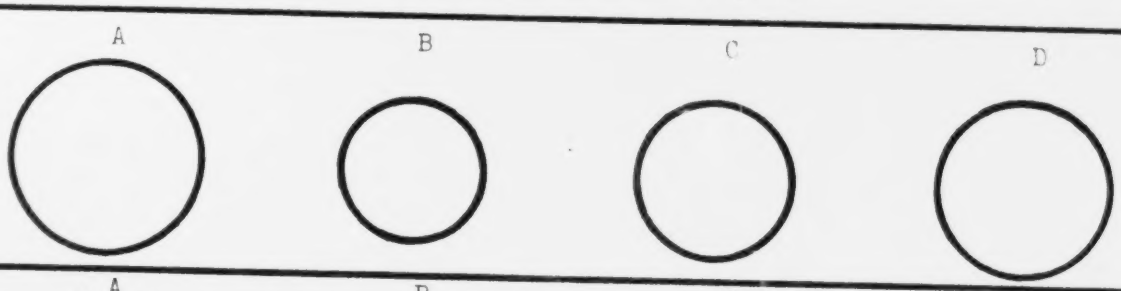


PART I: SIMILARITIES: Point to the picture on the left and say, "Now, show me the one over here" (gesture toward items on right) "that looks just like this one."
"Maintenant, montre-moi celui ici que est exactement comme celui-ci."
"Ahora, muéstrame el aquí que es muy semejante a éste."

		A	B	C	D
20.					
21.					
22.					
23.					
24.					
25.					

PART II: DIFFERENCES: Point to the pictures in each item and say, "Now, show me which one of these is the smallest one."
"Maintenant, montre-moi lequel de ceux-ci qui est le plus petit."
"Ahora, muéstrame cual de éstos que es el más pequeño."

Ex.



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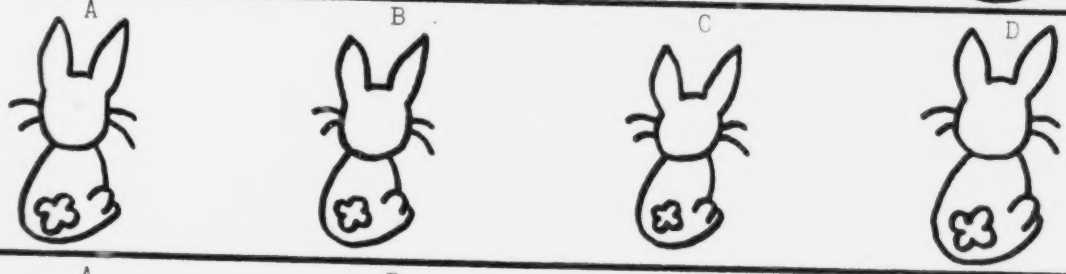

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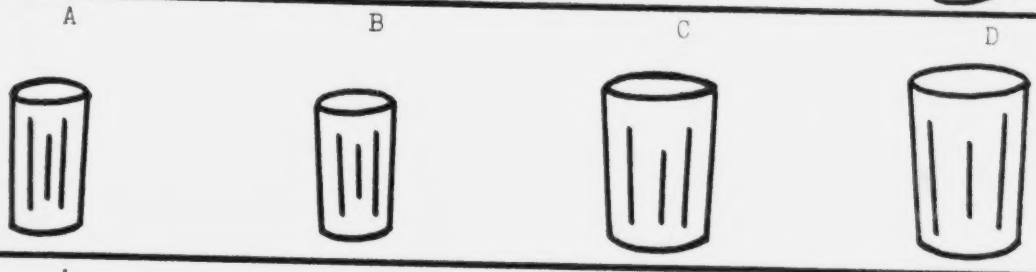

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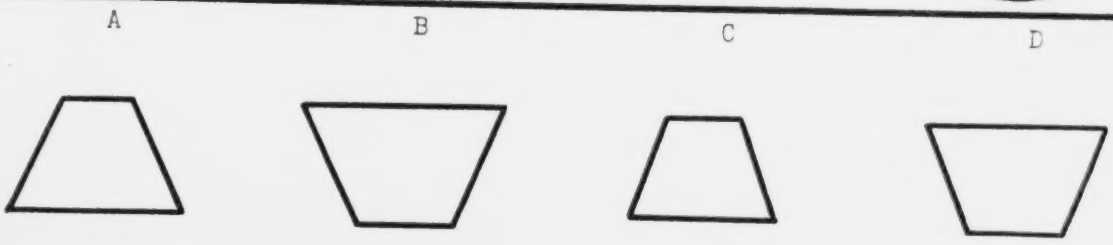

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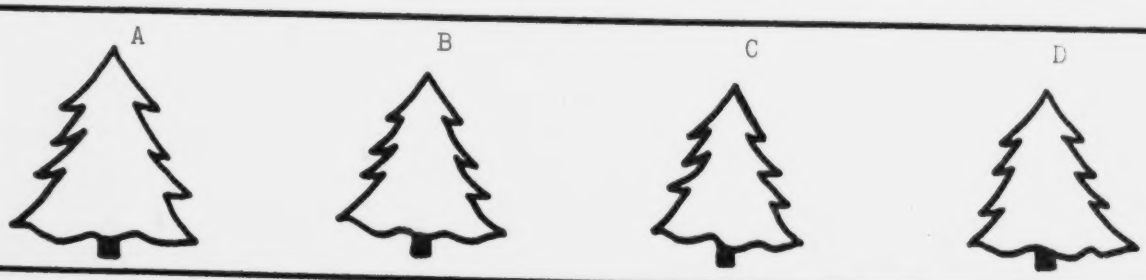

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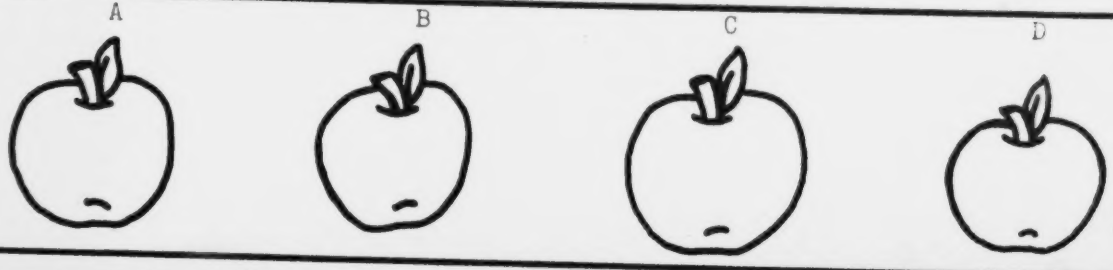
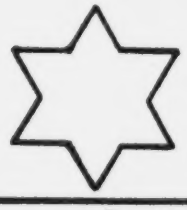
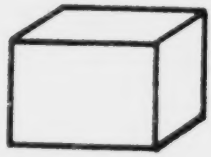


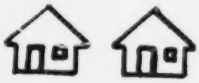
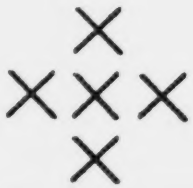
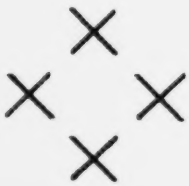
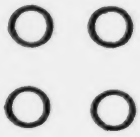
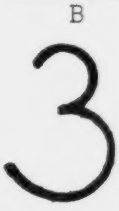
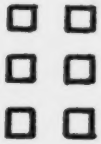
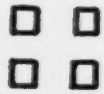
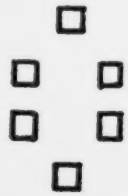
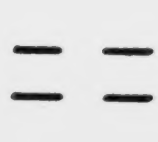
PART II: DIFFERENCES: Point to the pictures in each item and say, "Now, show me which one of these does not look like the others."
"Maintenant, montre-moi lequel de ceux-ci qui n'est pas comme les autres."
"Ahora, muéstrame cual de éstos que no es semejante a los otros."

	A	B	C	D
Ex.				
31.				
32.				
33.				
34.	bed	bed	red	bed
35.	Mow	Mow	Wow	Mow

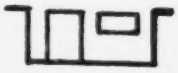
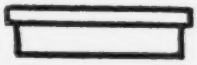
PART II: DIFFERENCES: Point to the pictures in each item and say, "Three of these belong together. One does not belong. Show me which one does not belong with the others."
"Trois de ceux-ci sont du même genre. Un ne l'est pas. Montre-moi lequel qui ne l'est pas."
"Tres de éstos son de mismo género. Uno no lo es. Muéstrame el que no lo es."

	A	B	C	D
Ex.				
36.				
37.				
39.				
40.				

PART III: NUMERICAL ANALOGIES: Point to the picture on the left and say, "Now, show me the one over here (gesture toward items on right) "that has the same number as this one."
"Maintenant, montre-moi celui ici qui a le même numéro que celui-ci."
"Ahora, muéstrame el aqui que tiene el mismo número que éste."

		A	B	C	D
Ex.					
41.					
42.					
43.					
44.					
45.					

PART IV: MISSING PARTS: Point to the picture on the left and say, "Now, point to the one over here" (gesture toward items on right) "which belongs to this one."
"Maintenant, indique celui ici qui appartient à celui-ci."
"Ahora, señala el aquí que pertenece a éste."

		A	B	C	D
Ex.					
46.					
47.					
48.					
49.					
50.					

Appendix C.

DENVER DEVELOPMENTAL SCREENING TEST

STO. = STOMACH
SIT = SITTING

PERCENT OF CHILDREN PASSING
25 50 75 90
May pass by report →
Footnote No. - → see back of form
Test Item

Date
Name
Birthdate
Hosp. No.

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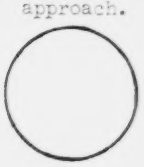
DATE

NAME

DIRECTIONS BIRTHDATE

HOSP. NO.

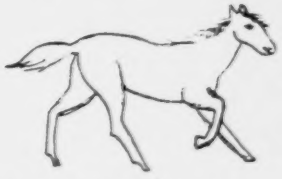
1. Try to get child to smile by smiling, talking or waving to him. Do not touch him.
2. When child is playing with toy, pull it away from him. Pass if he resists.
3. Child does not have to be able to tie shoes or button in the back.
4. Move yarn slowly in an arc from one side to the other, about 6" above child's face. Pass if eyes follow 90° to midline. (Past midline; 180°)
5. Pass if child grasps rattle when it is touched to the backs or tips of fingers.
6. Pass if child continues to look where yarn disappeared or tries to see where it went. Yarn should be dropped quickly from sight from tester's hand without arm movement.
7. Pass if child picks up raisin with any part of thumb and a finger.
8. Pass if child picks up raisin with the ends of thumb and index finger using an over hand approach.

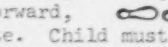
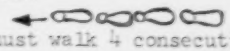


9. Pass any enclosed form. Fail continuous round motions.
10. Which line is longer? (Not bigger.) Turn paper upside down and repeat. (3/3 or 5/6)
11. Pass any crossing lines.
12. Have child copy first. If failed, demonstrate

When giving items 9, 11 and 12, do not name the forms. Do not demonstrate 9 and 11.

13. When scoring, each pair (2 arms, 2 legs, etc.) counts as one part.
14. Point to picture and have child name it. (No credit is given for sounds only.)



15. Tell child to: Give block to Mommie; put block on table; put block on floor. Pass 2 of 3. (Do not help child by pointing, moving head or eyes.)
16. Ask child: What do you do when you are cold? ..hungry? ..tired? Pass 2 of 3.
17. Tell child to: Put block on table; under table; in front of chair, behind chair. Pass 3 of 4. (Do not help child by pointing, moving head or eyes.)
18. Ask child: If fire is hot, ice is ?; Mother is a woman, Dad is a ?; a horse is big, a mouse is ?. Pass 2 of 3.
19. Ask child: What is a ball? ..lake? ..desk? ..house? ..banana? ..curtain? ..ceiling? ..hedge? ..pavement? Pass if defined in terms of use, shape, what it is made of or general category (such as banana is fruit, not just yellow). Pass 6 of 9.
20. Ask child: What is a spoon made of? ..a shoe made of? ..a door made of? (No other objects may be substituted.) Pass 3 of 3.
21. When placed on stomach, child lifts chest off table with support of forearms and/or hands.
22. When child is on back, grasp his hands and pull him to sitting. Pass if head does not hang back.
23. Child may use wall or rail only, not person. May not crawl.
24. Child must throw ball overhand 3 feet to within arm's reach of tester.
25. Child must perform standing broad jump over width of test sheet. (8-1/2 inches)
26. Tell child to walk forward,  heel within 1 inch of toe. Tester may demonstrate. Child must walk 4 consecutive steps, 2 out of 3 trials.
27. Bounce ball to child who should stand 3 feet away from tester. Child must catch ball with hands, not arms, 2 out of 3 trials.
28. Tell child to walk backward,  toe within 1 inch of heel. Tester may demonstrate. Child must walk 4 consecutive steps, 2 out of 3 trials.

DATE AND BEHAVIORAL OBSERVATIONS (how child feels at time of test, relation to tester, attention span, verbal behavior, self-confidence, etc,):

Appendix D

WALKER READINESS TEST FOR DISADVANTAGED PRESCHOOL CHILDREN
ANSWER SHEET--Form A

ANSWER SHEET (Make no marks on the test itself. Record all of the child's answers here.)

Child's Name_____ Name of Center_____

Child's Age_____ Location of Center_____
(years) (months) (birthdate) (town) (State) (Zip)

Child's Race_____ Population Density_____
(rural or urban)

Child's Sex_____

Date of Test Administration_____ Name of Test Administrator_____

Official Capacity_____

Child's Score_____ Percentile Rank_____

PART I: SIMILARITIES		PART II: DIFFERENCES	PART III: NUMERICAL ANALOGIES
1. A B C D	16. A B C D	26. A B C D	41. A B C D
2. A B C D	17. A B C D	27. A B C D	42. A B C D
3. A B C D	18. A B C D	28. A B C D	43. A B C D
4. A B C D	19. A B C D	29. A B C D	44. A B C D
5. A B C D	20. A B C D	30. A B C D	45. A B C D
6. A B C D	21. A B C D	31. A B C D	
7. A B C D	22. A B C D	32. A B C D	PART IV: MISSING PARTS
8. A B C D	23. A B C D	33. A B C D	46. A B C D
9. A B C D	24. A B C D	34. A B C D	47. A B C D
10. A B C D	25. A B C D	35. A B C D	48. A B C D
11. A B C D		36. A B C D	49. A B C D
12. A B C D		37. A B C D	50. A B C D
13. A B C D		38. A B C D	
14. A B C D		39. A B C D	
15. A B C D		40. A B C D	

Please record below any unusual circumstances concerning the child or the situation which might affect the validity or reliability of the test.

TABLE 1

MEAN, MEDIAN, Q_3, Q_1, Q, STANDARD DEVIATION, AND PERCENTILE RANKS FOR CHILDREN IN FORM A NORMING GROUP

	AGE							
Measurement	6-7 up	6-1:6-6	5-7:6-0	5-1:5-6	4-7:5-0	4-1:4-6	4-0 down	TOTAL
Mean	35.69	36.88	34.36	33.04	29.30	28.02	25.54	33.61
Median	35.89	37.37	33.65	34.32	30.24	27.50	25.25	35.45
Q_3	41.81	42.73	40.95	39.54	36.16	34.59	31.83	42.83
Q_1	30.55	31.42	28.71	27.23	24.77	21.70	19.83	28.49
Q	5.63	5.65	6.14	6.15	5.69	6.34	6.00	7.17
Stand. Dev.	7.97	7.97	8.48	8.49	8.22	8.64	8.05	8.61
Percentile Ranks (Class Intervals)								
49-51	99.84	99.57	99.47	99.94	99.99	99.99	99.94	99.93
46-48	96.24	95.84	97.61	98.50	99.74	99.61	99.94	98.01
43-45	89.04	86.25	91.00	94.19	97.76	98.43	99.94	92.34
40-42	78.00	73.69	80.45	85.56	91.91	93.31	98.55	82.89
37-39	64.32	58.86	68.85	74.81	85.64	88.98	97.16	71.96
34-36	53.04	46.09	56.09	63.00	76.35	83.86	90.22	60.45
31-33	37.68	32.98	42.63	50.75	64.49	71.26	81.89	47.58
28-30	24.72	21.32	30.39	37.63	51.24	61.42	69.40	35.10
25-27	15.36	14.49	19.95	25.75	36.97	50.00	62.46	24.48
22-24	9.36	7.45	12.53	17.31	23.82	38.58	45.80	15.72
19-21	4.56	4.00	7.48	10.56	14.87	24.02	32.92	9.48
16-18	2.88	1.93	3.13	5.25	8.00	14.57	19.43	4.83
13-15	.72	.35	1.68	2.13	3.78	5.12	8.33	2.01
10-12	.24	.21	.58	.56	1.46	2.76	5.55	.77
7- 9		.07	.17	.06	.34	.79	4.16	.21
4- 6		.07	.06		.17			.06
1- 3		.07						.015
Number in Group	416	1443	1715	1599	1163	254	72	6662

Appendix E

WALKER READINESS TEST FOR DISADVANTAGED PRESCHOOL CHILDREN
ANSWER SHEET--Form B

ANSWER SHEET (Make no marks on the test itself. Record all of the child's answers here.)

Child's Name _____ Name of Center _____

Child's Age _____ Location of Center _____
(years) (months) (birthdate) (town) (State) (Zip)

Child's Race _____ Population Density _____
(rural or urban)

Child's Sex _____

Date of Test Administration _____ Name of Test Administrator _____

Official Capacity _____

Child's Score _____ Percentile Rank _____

PART I: SIMILARITIES		PART II: DIFFERENCES	PART III: NUMERICAL ANALOGIES
1. A B C D	16. A B C D	26. A B C D	41. A B C D
2. A B C D	17. A B C D	27. A B C D	42. A B C D
3. A B C D	18. A B C D	28. A B C D	43. A B C D
4. A B C D	19. A B C D	29. A B C D	44. A B C D
5. A B C D	20. A B C D	30. A B C D	45. A B C D
6. A B C D	21. A B C D	31. A B C D	
7. A B C D	22. A B C D	32. A B C D	PART IV: MISSING PARTS
8. A B C D	23. A B C D	33. A B C D	46. A B C D
9. A B C D	24. A B C D	34. A B C D	47. A B C D
10. A B C D	25. A B C D	35. A B C D	48. A B C D
11. A B C D		36. A B C D	49. A B C D
12. A B C D		37. A B C D	50. A B C D
13. A B C D		38. A B C D	
14. A B C D		39. A B C D	
15. A B C D		40. A B C D	

Please record below any unusual circumstances concerning the child or the situation which might affect the validity or reliability of the test.

TABLE 2

MEAN, MEDIAN, Q_3, Q_1, Q, STANDARD DEVIATION, AND PERCENTILE RANKS FOR CHILDREN IN FORM B NORMING GROUP

	AGE							
Measurement	6-7 up	6-1:6-6	5-7:6-0	5-1:5-6	4-7:5-0	4-1:4-6	4-0 down	TOTAL
Mean	40.51	41.10	38.98	37.20	34.50	30.72	28.82	38.23
Median	41.89	42.52	40.29	38.19	34.91	32.44	30.07	39.50
Q_3	46.51	46.17	45.11	43.99	40.89	38.49	36.07	44.94
Q_1	35.20	36.66	33.97	31.60	28.66	24.85	24.71	32.71
Q	5.65	4.75	5.57	6.19	6.11	6.82	5.68	6.11
Stand. Dev.	7.82	7.20	7.85	8.39	7.39	9.18	8.11	8.36
Percentile Ranks (Class Intervals)								
49-51	99.86	99.79	99.96	99.93	99.96	99.98	99.99+	99.62
46-48	86.64	86.79	91.69	94.45	98.12	97.06	99.99	91.55
43-45	67.94	68.17	77.11	81.99	90.61	94.14	98.00	77.47
40-42	52.68	49.78	60.78	67.99	80.47	88.87	96.00	62.63
37-39	39.22	36.33	45.99	55.88	70.20	79.52	92.00	49.82
34-36	28.73	24.32	34.21	42.34	57.29	66.07	88.00	37.61
31-33	20.06	16.95	23.27	30.95	43.46	54.96	72.00	27.22
28-30	11.63	9.80	15.14	21.53	32.00	40.93	54.00	18.47
25-27	6.16	5.55	8.69	13.72	20.55	32.74	38.00	11.53
22-24	3.88	2.51	5.54	8.97	11.06	23.97	24.00	6.96
19-21	2.51	1.37	2.87	5.11	6.19	16.37	20.00	4.04
16-18	1.37	.53	1.54	2.24	3.03	8.77	14.00	1.98
13-15	.456	.23	.35	.81	1.45	3.51	6.00	.74
10-12		.15	.14	.27	1.05	1.17	2.00	.34
7- 9		.076	.14		.53	.58	2.00	.17
4- 6					.39	.58	2.00	.11
1- 3								
Number in Group	438	1313	1426	1114	759	171	50	5271

DDST (Denver Developmental Screening Test) Appendix F

TEST FORM

The DDST is made up of 105 tasks, or items, written in the range of accomplishments of children in the age span from birth to six years. These items are arranged on the test form in four sectors:

1. Personal-Social -- That is, tasks which indicate the child's ability to get along with people and to take care of himself.

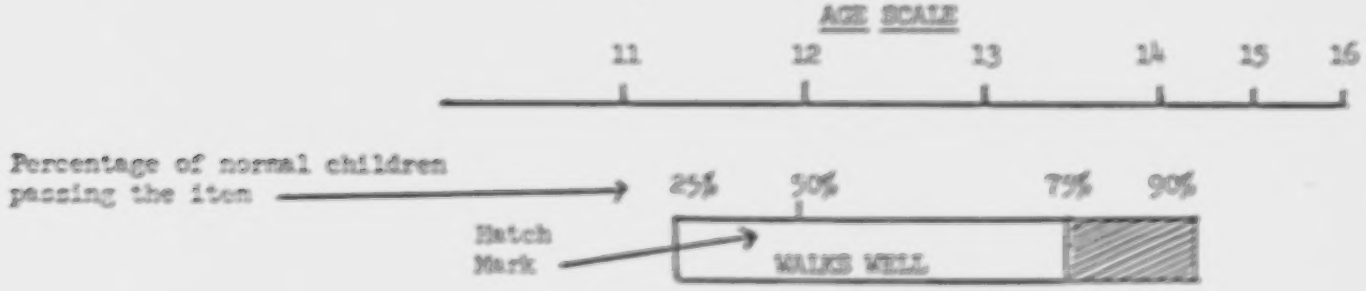
2. Fine Motor-Adaptive -- That is, the child's ability to see and to use his hands to pick up objects and to draw.

3. Language -- That is, the child's ability to hear, carry out commands and to speak.

4. Gross Motor -- That is, the child's ability to sit, walk and jump.

Across the top and the bottom of the test form are age scales which show ages in months from 1 to 24, and in years from 2½ to 6 (See Figure 2). Each of the 105 test items is represented on the form by a bar which is placed between the age scales to show when 25%, 50%, 75% and 90% of normal children can do that item (Figure 3, below).

FIGURE 3



In the above item, "Walks Well," the left end of the bar shows that 25% of normal children can walk well at a little over 11 months; the hatch mark shows 50% can do this at 12 months; the left end of the shaded area shows 75% at 13½ months; and the right end of the bar shows 90% of normal children can walk well at a little over 14 months. All of the test items are shown on the test form in the same way.

Some test items have a small footnote number on the left end of the bar. Short instructions for giving the items with numbers are given on the back of the test form (See Figure 4). For example: the instruction for the item, "Walks Up Steps," is #23 on the back of the form. Test items which can be passed by report of the parent have an "R" on the bar, (Figure 5)

FIGURE 5